

**REMARKS**

Reconsideration and allowance of the above-reference application are respectfully requested.

**I. STATUS OF THE CLAIMS**

Claims 4, 16, 25-28, 33-35, 47, 54, 59 and 60 are cancelled herein.

Claims 1-3 and 15 are amended herein.

In view of the above, it is respectfully submitted that claims 1-3 and 15 are currently pending and under consideration.

**II. REJECTION OF CLAIMS 16, 47, AND 54 UNDER 35 U.S.C. § 103(A) AS BEING UNPATENTABLE OVER KOSAKA, ET AL. (USP# 6,195,480) IN VIEW OF DELAUAUX, ET AL. (USP#5,608,562)**

Claims 16, 47, and 54 are cancelled herein.

In view of the above, it is respectfully submitted that the rejection is overcome.

**III. REJECTION OF CLAIMS 1-4, 15, 16, 25-28, 33-35, 47, 54, 59, AND 60 UNDER 35 U.S.C. § 103(A) AS BEING UNPATENTABLE OVER KINOSHITA, ET AL. (USP# 6,496,300) IN VIEW OF DELAUAUX, ET AL. (USP# 5,608,562)**

The present invention as recited, for example, in claim 1 relates to a method of "providing an optical transmission line composed of a plurality of segments each having a length falling within a predetermined range, said plurality of segments including a plurality of fiber types." Thus, for example, the present invention provides a method of dispersion compensation in a case where the optical transmission line is composed of a plurality of fiber types.

Kinoshita discloses an optical fiber transmission line composed of only single mode fibers (SMF) in column 6, lines 10-17 and in Fig. 1A. However, Kinoshita fails to disclose an optical transmission line composed of a plurality of fiber types.

Claim 1 also recites the method of "providing a dispersion compensator in association with each of said optical transmitter, said optical receiver and said optical amplifier". Thus, for example, in the present invention, the dispersion compensator may be provided in not only an optical amplifier but also an optical transmitter, and an optical receiver.

Kinoshita discloses that a dispersion compensation module DCM is located between the

pre-stage optical amplifier 4-4 and the post-stage optical amplifier 4-5 of the optical post-amplifier module TWAA.

However, the dispersion compensation module DCM of Kinoshita is provided inside of an optical repeater, but is not provided in association with each of the optical transmitter, the optical receiver and the optical amplifier as recited in claim 1 of the present invention.

Claim 1 recites the method of "providing a dispersion compensator according to said optical fiber type and a dispersion value of said optical fiber transmission line immediately upstream thereof, and said optical fiber type and said dispersion value of said optical fiber transmission line immediately downstream thereof". Thus, for example, in the present invention, it is determined according to the optical fiber types and dispersion values of the optical fiber transmission line immediately upstream and immediately downstream whether the dispersion compensator is provided or not. That is, the dispersion compensator is not provided in the transmitter in a case where the fiber type of the optical fiber transmission line immediately downstream of the optical transmitter is DSF type. The dispersion compensator is provided in an optical amplifier in a case where the fiber type of the optical fiber transmission line immediately upstream of the optical amplifier is DSF type, and the fiber type of the optical fiber transmission line immediately downstream of the optical amplifier is SMF type. Therefore, in the present invention, a transmission characteristic is improved and a number of the dispersion compensators can be minimized.

In light of the above, it is respectfully submitted that Kinoshita fails to teach or suggest the features recited in claim 1 of the present invention.

Delavaux discloses an optical communication system that uses adjustable dispersion compensating fibers to compensate for dispersion in system fibers and optical fibers 1<sub>1</sub>, 1<sub>2</sub>, 1<sub>3</sub>, and 1<sub>4</sub> in Fig. 4.

However, Delavaux does not teach or suggest the method of "providing an optical transmission line composed of a plurality of segments each having a length falling within a predetermined range, said plurality of segments including a plurality of fiber types," "providing a dispersion compensator in association with each of said optical transmitter, said optical receiver and said optical amplifier," and "providing a dispersion compensator according to said optical fiber type and a dispersion value of said optical fiber transmission line immediately upstream thereof, and said optical fiber type and said dispersion value of said optical fiber transmission line immediately downstream thereof." Therefore, it is respectfully submitted that Delavaux does

not teach or suggest the features recited in claim 1 of the present invention.

Thus, it would not have been obvious to a person of ordinary skill in the art to combine the teachings of Kinoshita and Delavaux to disclose the features recited in claim 1.

Kosaka (USP# 6,195,480) discloses a dispersion compensator between optical amplifiers and single mode fiber 89 in Fig. 1.

However, Kosaka also fails to teach or suggest the method of "providing an optical transmission line composed of a plurality of segments each having a length falling within a predetermined range, said plurality of segments including a plurality of fiber types," "providing a dispersion compensator in association with each of said optical transmitter, said optical receiver and said optical amplifier," and "providing a dispersion compensator according to said optical fiber type and a dispersion value of said optical fiber transmission line immediately upstream thereof, and said optical fiber type and said dispersion value of said optical fiber transmission line immediately downstream thereof." Therefore, it is respectfully submitted that claim 1 is not rendered obvious over the teachings of Kosaka in view of Delavaux.

Claim 15 as amended herein, sets forth similar features as recited, for example, in claim 1. Therefore, it is respectfully submitted that claim 15 also is not rendered obvious over the teachings of Kinoshita in view of Delavaux, or the teachings of Kosaka in view of Delavaux.

Claims 2 and 3 depend from claim 1. Therefore, for at least the reason that claim 1 distinguishes over the cited prior art, it is respectfully submitted that claims 2 and 3 also distinguish over the cited prior art.

In view of the above, it is respectfully submitted that the rejection is overcome.

#### **IV. CONCLUSION**

In view of the foregoing amendments and remarks, it is respectfully submitted that each of the claims patentably distinguishes over the prior art, and therefore defines allowable subject matter. A prompt and favorable reconsideration of the rejection along with an indication of allowability of all pending claims are therefore respectfully requested.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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